APPENDIX

ABSTRACT

In a signal processing integrated circuit having an analog to digital converter and a digital filter having a plurality of taps separated in time, when starting a conversion after a reset or a change of input channel, the filter will have an incomplete set of input data as the delayed inputs to an output calculation are all zero from the reset operation. After reset, during the time that data are filling up the filter pipeline, the calculation of an output value will give a result that holds information about the input, but does not present the data with the same scaling and frequency content as the fully settled filter. The integrated circuit selectively provides two modes, on that provides only fully settled data from the filter or and another that provides all data from the filter, including unsettled data. Knowledge about the filter coefficients can be utilized by a user or user process to extract information about the input from the unsettled data.

CROSS-REFERENCES TO RELATED APPLICATIONS

This application claims priority to U.S. Provisional Patent Application Serial No. 60/216,346, filed July 5, 2000, by inventors Axel Thomsen, Sherry Wu, Edwin de Angel, Aryesh Amar, Lei Wang, Eric J. Swanson and Jerome E. Johnston, entitled "ARNOLD PROVISIONAL" (Docket No. 50246-072) which is hereby incorporated by reference in its entirety.

This application is related to U.S. Patent Application Serial Number 09/054,542, filed April 3, 1998, by inventors Wai Laing Lee, Axel Thomsen and Dan Kasha, entitled "ANALOG TO DIGITAL SWITCHED CAPACITOR CONVERTER USING A DELTA-SIGMA MODULATOR HAVING VERY LOW POWER, DISTORTION AND NOISE" (Docket No. 0839-CS/50246-024).

This application is related to U.S. Patent Application Serial No. 09/321,583, filed May 28, 1999, by inventors Aryesh Amar, Jerome E. Johnston and Donald Keith Coffey, entitled "USE OF POINTERS TO ENHANCE FLEXIBILITY OF SERIAL PORT INTERFACE FOR AN INTEGRATED CIRCUIT WITH PROGRAMMABLE COMPONENTS" (Docket No. 0937-CS/50245-101).

This application is related to U.S. Patent Application Serial No. 09/695,702, filed October 25, 2000, by inventors Axel Thomsen and Lei Wang, entitled "TECHNIQUES FOR IMPLEMENTING A ROUGH BUFFER FOR CHARGING A SAMPLING CAPACITOR" (Docket No. 50246-07 1).

This application is related to U.S. Patent Application Serial No. 09/695,706, filed October 25, 2000, by inventors Axel Thomsen, Edwin de Angel, Sherry Wu, Lei Wang and Aryesh Amar, entitled "TECHNIQUES FOR SIGNAL MEASUREMENT USING A CONDITIONALLY STABLE AMPLIFIER" (Docket No. 50246-070).

This application is related to U.S. Patent Application Serial No. 09/695,707 filed October 25, 2000, by inventor Edwin de Angel, entitled "A MULTIPLIER WITH EFFICIENT CARRY RIPPLE " (Docket No. 50246-073).

This application is related to U.S. Patent Application Serial No. 09/695,708, filed October 25, 2000, by inventors Aryesh Amar, Edwin de Angel and Eric J. Swanson, entitled "INDEPENDENT CONTROL OF CALIBRATION REGISTERS IN A MULTI CHANNEL A-D CONVERTER" (Docket No. 50246-074).

This application is related to U.S. Patent Application Serial No. 09/695,703, filed October 25, 2000, by inventor Axel Thomsen, entitled "INDIRECT TECHNIQUES FOR MEASURING I/f NOISE" (Docket No. 50246-076).

This application is related to U.S. Patent Application Serial No. 09/695,705, filed October 25, 2000, by inventors Axel Thomsen, Edwin de Angel, Sherry Wu, Aryesh Amar and Jerome E. Johnston, entitled "APPLICATIONS OF A CONDITIONALLY STABLE INSTRUMENTATION AMPLIFIER TO INDUSTRIAL MEASUREMENT" (Docket No. 50246-077.